

## ABSTRACT OF THE DISCLOSURE

A method and apparatus for auto-calibrating an electronic device without  
interrupting normal operation of the device. An electronic device configured as a high  
voltage difference amplifier is disclosed having a calibration circuit which couples a  
5 calibration excitation signal to a common-mode signal path of the difference amplifier.  
The difference amplifier includes a variable transfer function circuit which may be used  
to adjust the common-mode rejection of the difference amplifier. The calibration  
excitation signal may be a random, pseudo-random, out-of-band, or other frequency  
shaped signal generated in reference to a clock signal. A calibration error signal is  
10 detected from an output signal. The variable transfer function circuit can be adjusted in  
response to the detected error signal to reduce the calibration error signal. As a result,  
common-mode rejection errors of the difference amplifier may be reduced while the  
difference amplifier is coupled to an input signal source.

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